



Tsunami Hits Anchialine Pools

"Puffy" is his name. A large spiny balloonfish had become the new unofficial mascot of Pu'uhonua o Hōnaunau National Historical Park (PUHO). As a result of the March 11 tsunami, Puffy and many other marine fish were swept up in the waves and landed in ecologically and culturally important brackish-water anchialine pools along the Kona Coast on the island of Hawai'i.

The Kona coast showed major signs of tsunami damage. The NPS aquatic biology team arrived at PUHO for our quarterly water sampling trip at the end of April. At one of the fish pond sites in the royal court, the tide was extremely low when we first saw some of the damage. The rock wall was in pieces, sediment had shifted, and a marine balloonfish was in this inland pool. We knew we had to help Puffy. After finishing the water quality sampling, we grabbed a seine, dip nets, an action packer, some help, and hopped into the pool; boots and all.

The biggest concern with Puffy was his defense mechanism. Like all porcupinefish he might "puff up" when threatened. Unfortunately, this stresses the fish and could potentially kill it. But Puffy had no food source in the pool and could not survive there for very long. We knew we had to act fast.

We seined the fish across the pond to the shallows. Then a local park kupuna (elder) scooped Puffy up with a net and immediately put him into the water-filled action packer. We hurriedly escorted Puffy to the ocean. A couple of seconds passed and Puffy swam happily away. As I emerged soaking wet and smiling out of the fish pond, I knew we saved an overlooked tsunami victim.



The Rescue

Other areas along the coast suffered even more tsunami damage. A few water quality sampling locations along the Ala Kahakai National Historic Trail completely surprised us. Just one week after the tsunami, we drove down Ali'i Drive in Kailua and passed Kahalu'u Beach Park. There we noticed huge barricades and orange fencing. We quickly turned the vehicle around and went to investigate an established water quality site. The ocean breakwall had a gaping 3 meter hole. But worse, an important anchialine pool had doubled in size with extra salt water and filled in with sand and marine fish. The vegetation around the pool was also significantly damaged.

Fortunately, the County of Hawai'i with help from The Kohala Center, will restore the pool to its original form. This includes removing all of the non-native vegetation, rebuilding the wall, digging out the sand, and removing any animals that don't historically belong in that anchialine pool.



Puffy's rescue and the Kahalu'u Beach Park restoration project are stories of hope. But, as we continued our sampling in April, we went to another site along the Ala Kahakai NHT, also located on Ali'i Drive. We arrived smiling, happy, and in high spirits as we walked to what had been our sampling site (a sacred anchialine pool). I carefully looked around and said, "That's odd, I thought it was right here. I remember walking under this tree, and next to that stump was the pool." The stump was surrounded by large rocks, and when we looked closer we saw the remains of the anchialine pool; now a small puka (hole) with no water. It hadn't occurred to us that this pool could be filled in with coral and lava rocks from the tsunami. But there we were, staring at the rubble; flabbergasted. "Crazy" and "sad" were words we used to describe the scene. This special pool, highly valued by some Hawaiians, was now pau (finished). Perhaps the local man we call "Uncle", who watches over the pool, will be able to restore it.



The Stump

The Anchialine Pool



All in all, many anchialine pools and wetlands along the Kona Coast were significantly altered or destroyed. Fortunately, West Hawai'i national parks, the County of Hawai'i, and the local community are all giving helping hands to restore the damaged coast, and preserve the cultural and ecological integrity of these unique ecosystems.

—M. Jerolaman, aquatic volunteer